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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,630	12/26/2001	Shigeru Suzuki	P21540	4459

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EXAMINER

ELLINGTON, ALANDRA

ART UNIT PAPER NUMBER

2855

DATE MAILED: 09/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/025,630

Applicant(s)

SUZUKI ET AL.

Examiner

Alandra N Ellington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority ✓

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 200-397945, filed on 12/27/00.

Specification ✓

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings ✓

Figure 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because it is unclear as to what the difference is between “insulative member 15” and “yarn strands 15a” in Fig. 5. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “automobile body” and “door” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112 ✓

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-13, 20, and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites “so that said net braid member” which makes this statement unclear and ambiguous, due to the element not previously being mentioned.

Claims 7-13 depend from rejected claim 6 and include all of the limitations in claim 6 thereby rendering these dependent claims unclear and ambiguous.

Claims 20 and 21 are not proper dependent forms of claim 1. Also, it is unclear as to what the applicant is claiming. Is the applicant claiming the automobile body and door or a pressure sensitive sensor?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 9, 14-15, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,311,779 to Teruo. Teruo discloses a pressure sensitive sensor as claimed (see Figs. 1-21 and respective portions of the specification).

Referring to claim 1, Teruo discloses a pressure sensitive sensor 1 for detecting pressure by electrical conduction caused by pressing into contact with each other a first electrode member 4 and a second electrode member 6 provided in a spaced arrangement in an unpressed state, said pressure sensitive sensor 1 comprising:

An insulative member 3 provided between said first electrode member 4 and said second electrode member 6, said insulative member 3 including an insulating material (col. 4 lines 59-64) that allows electrical contact between said first electrode member 4 and said second electrode member 6 through a gap portion in its mesh when pressed, and insulates said first electrode member 4 and said second electrode member 6 when not pressed (col. 4 lines 65-67, col. 5 lines 3-12 {Fig. 2}).

Referring to claim 6, Teruo discloses the pressure sensitive sensor 1 according to claim 1,

Wherein said first electrode member 4 includes an elastic electroconductive tube 10 comprising an elastic electroconductive material (col. 4 lines 54-57), said second electrode member 6 includes a central electrode member (X1 {Fig. 6}) having a long narrow bendable shape provided inside said elastic electroconductive tube 10, and said insulative member 3 is provided between said central electrode member (X1 {Fig. 6}) and said elastic electroconductive tube 10 so that said net braid member covers an outer peripheral surface of said central electrode member (X1 {Fig. 6}) (Fig. 12).

Referring to claim 9, Teruo discloses the pressure sensitive sensor 1 according to claim 6,

Wherein said elastic electroconductive tube 10 is formed by extrusion molding (col. 4 lines 54-57) said elastic electroconductive material (col. 4 lines 54-57) on an outer peripheral surface of said central electrode member (X1 {Fig. 6}) and covering said insulative member 3 (Fig. 12).

Referring to claim 14, Teruo discloses the pressure sensitive sensor 1 according to claim 1,

Wherein said first electrode member 4 includes a first plate (9 {Fig. 3}) comprising an elastic electroconductive material (col. 4 lines 54-57), said second electrode member 6 includes a second plate (Fig. 6) comprising an elastic electroconductive material (col. 4 lines 54-57), and said insulative member 3 is provided between said first plate (9 {Fig. 3}) and said second plate (Fig. 6).

Referring to claim 15, Teruo discloses the pressure sensitive sensor 1 according to claim 14,

Wherein said first and second electrode members 4,6 are restorable to their shapes from tensile and bonding deformation (col. 6 lines 63-68, col. 7 lines 1-2).

Referring to claim 17, Teruo discloses a method of making a pressure sensitive sensor 1 for detecting pressure by electrical conduction caused by pressing into contact with each other a first electrode member 4 and a second electrode member 6 provided in a spaced arrangement in an unpressed state, said method comprising:

Providing an insulative member 3 provided between said first electrode member 4 and said second electrode member 6, said insulative member 3 including an insulating material (col. 4 lines 59-64) that allows electrical contact between said first electrode member 4 and said

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second electrode member 6 through a gap portion in its mesh when pressed, and insulates said first electrode member 4 and said second electrode member 6 when not pressed (col. 4 lines 65-67, col. 5 lines 3-12 {Fig. 2}).

Referring to claim 19, Teruo discloses the method of making a pressure sensitive sensor 1 according to claim 17, said method comprising:

Providing a first electrode member 4 including an elastic electroconductive tube 10 (Fig. 3),

Providing a second electrode member 6 including a central electrode member (X1 {Fig. 6}) including a central electrode member (X1 {Fig. 6}) having a long narrow bendable shape provided inside said elastic electroconductive tube 10, and

Providing said insulative member 3 between said central electrode member (X1 {Fig. 6}) and said elastic electroconductive tube 10 so that said insulative member 3 covers an outer peripheral surface of said central electrode member (X1 {Fig. 6}) (Fig. 12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, 7-8, 10-13, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teruo in view of Ebato.

Teruo discloses the invention as claimed except for said insulative member including a net braid member (cl 2, cl 18), said net braid member is formed by knitting a plurality of yarn strands (cl 3, cl 18), said yarn strands each include an insulating fiber coated on its surface with an insulating resin or rubber (cl 4), said yarn strands each include an insulating fiber impregnated with an insulating resin or rubber (cl 5), said central electrode member is restorable to its shape from tensile and bending deformation and an electroconductive metal wire wound on the outer periphery of said central member in a coil (cl 7), said central electrode member is provided with an electroconductive coating layer including one of an electroconductive resin and an electroconductive rubber provided on the inside of said insulative member so that an outer peripheral surface of said central member is covered underneath said metal wire (cl 8), said central electrode member is constructed by one of twisting and bundling a plurality of single metal wires (cl 10), said central electrode member comprises a single metal wire (cl 11), said electroconductive metal wire wound on said outer periphery of said central member in a coil is wound tightly around said central member and is embedded into said outer periphery of said central member (cl 12), and said electroconductive metal wire is embedded in said outer periphery of said central member to substantially half the diameter of said electroconductive metal wire (cl 13).

Ebato teaches said insulative member including a net braid member (Fig. 6A, cl 2, cl 18), said net braid member is formed by knitting a plurality of yarn strands (col. 9 lines 2-8, cl 3, cl 18), said yarn strands each include an insulating fiber coated on its surface with an insulating resin or rubber (col. 9 lines 2-8, cl 4), said yarn strands each include an insulating fiber impregnated with an insulating resin or rubber (col. 9 lines 2-13, cl 5), said central electrode

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member is restorable to its shape from tensile and bending deformation and an electroconductive metal wire wound on the outer periphery of said central member in a coil (col. 9 lines 57-68, col. 10 lines 1-3, 20-30, cl 7), said central electrode member is provided with an electroconductive coating layer including one of an electroconductive resin and an electroconductive rubber provided on the inside of said insulative member so that an outer peripheral surface of said central member is covered underneath said metal wire (col. 10 lines 20-30, cl 8), said central electrode member is constructed by one of twisting and bundling a plurality of single metal wires (col. 7 lines 58-68, cl 10), said central electrode member comprises a single metal wire (col. 10 lines 20-25 {Fig. 6C}, cl 11), said electroconductive metal wire wound on said outer periphery of said central member in a coil is wound tightly around said central member and is embedded into said outer periphery of said central member (col. 10 lines 20-30, cl 12), and said electroconductive metal wire is embedded in said outer periphery of said central member to substantially half the diameter of said electroconductive metal wire (col. 9 lines 37-40, cl 13) for the purpose of providing a tubular hose member having insulating property and elasticity.

Since Teruo and Ebato are both from the same field of endeavor, the purpose disclosed by Ebato would have been recognized in the pertinent art of Teruo.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Teruo with the teachings of Ebato as noted above to include said insulative member including a net braid member, said net braid member is formed by knitting a plurality of yarn strands, said yarn strands each include an insulating fiber coated on its surface with an insulating resin or rubber, said yarn strands each include an insulating fiber impregnated with an insulating resin or rubber, an electroconductive metal wire wound on the

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outer periphery of said central member in a coil, said central electrode member is provided with an electroconductive coating layer including one of an electroconductive resin and an electroconductive rubber provided on the inside of said insulative member so that an outer peripheral surface of said central member is covered underneath said metal wire, said central electrode member is constructed by one of twisting and bundling a plurality of single metal wires, said central electrode member comprises a single metal wire, said electroconductive metal wire wound on said outer periphery of said central member in a coil is wound tightly around said central member and is embedded into said outer periphery of said central member, and said electroconductive metal wire is embedded in said outer periphery of said central member to substantially half the diameter of said electroconductive metal wire for the purpose of providing a tubular hose member having insulating property and elasticity so that the surfaces of the conductive members should be partially exposed to the internal space of the hose member at any section of the hose member.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Ishihara et al. U.S. Patent No. 6,349,461 discloses a method of manufacturing a pressure sensitive sensor as claimed.
2. Evangelista et al. U.S. Patent No. 5,114,636 discloses a net braid member and coil as claimed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra N. Ellington whose telephone number is (703)305-4449.

The examiner can normally be reached on Monday - Friday, 6:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)306-7725 for regular communications and (703)305-3839 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1782.

Alandra Ellington
A.U. 2855

ANE
September 17, 2002



HARSHAD PATEL
PRIMARY EXAMINER